

LISTING OF THE CLAIMS

1. (Currently Amended) Coiling device to coil rolled or drawn long products, comprising a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, wherein said long products are able to be wound on said mandrel in adjacent and superimposed spirals, in order to form a compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very angled, with respect to said central longitudinal axis, wherein said mandrel comprises a flange substantially orthogonal, or very angled, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, wherein said mandrel also comprises first arm elements, able to define the cylindrical surface of the core that forms said coil, and second arm elements, opposite said flange, and able to define a second flank of said coil, said first and said second arm elements being ~~mobile~~ movable between a first coil-forming position and a second coil-removal position, and wherein each one of said first arm elements is provided with a first inclined wall, which is inclined with respect to said longitudinal axis and which in said first coil-forming position is in contact with a corresponding second inclined wall provided in each one of said second arm elements ~~are provided with preventing means able to contact said first arm elements~~, in order to prevent said first arm elements from moving from said first coil-forming position to said second coil-removal position ~~until~~ when said second arm elements are in said first coil-forming position.

2. (Previously Presented) Coiling device as in claim 1, wherein said first arm elements in said first position are substantially parallel to said central longitudinal axis, while in said second position said first arm elements are

inclined with respect to said central longitudinal axis, so as to define a substantially truncated cone surface converging towards the cantilevered end of said mandrel.

3. (Previously Presented) Coiling device as in claim 1, wherein said first arm elements comprise a plurality of axial arms arranged at intervals around said central longitudinal axis.

4. (Previously Presented) Coiling device as in claim 1, wherein said second arm elements in said first position are substantially orthogonal, or very angled, with respect to said central longitudinal axis, while in said second position they are substantially parallel to said central longitudinal axis and outside the space occupied by said formed coil.

5. (Previously Presented) Coiling device as in claim 1, wherein said second arm elements comprise a plurality of containing arms arranged at intervals around said central longitudinal axis.

6. (Previously Presented) Coiling device as in claim 5, wherein said containing arms are pivoted on said mandrel, by means of respective pins, so that during their movement from said position to form said coil to said position to remove said coil, they do not interfere with the spirals of said formed coil.

7. (Currently Amended) Coiling device as in claim 1, wherein said flange comprises a front wall ~~mobile parallel~~ which is movable in parallel to said central longitudinal axis in order to be positioned axially in a desired position.

8. (Currently Amended) Coiling device ~~as in claim 1~~ to coil rolled or drawn

long products, comprising a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, wherein said long products are able to be wound on said mandrel in adjacent and superimposed spirals, in order to form a compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very angled, with respect to said central longitudinal axis, wherein said mandrel comprises a flange substantially orthogonal, or very angled, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, wherein said mandrel also comprises first arm elements, able to define the cylindrical surface of the core that forms said coil, and second arm elements, opposite said flange, and able to define a second flank of said coil, said first and said second arm elements being movable between a first coil-forming position and a second coil-removal position, and wherein said second arm elements are provided with preventing means able to contact said first arm elements, in order to prevent said first arm elements from moving from said first coil-forming position to said second coil-removal position when said second arm elements are in said first coil-forming position, and wherein said flange comprises a deposition ring cooperating which extends parallel to said central longitudinal axis and is aligned with said first arm elements, in order to define the cylindrical winding surface of the first rear spirals of a first layer of said spirals of said coil.

9. (Currently Amended) Coiling device as in claim 4 to coil rolled or drawn long products, comprising a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, wherein said long products are able to be wound on said mandrel in adjacent and superimposed spirals, in order to form a

compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very angled, with respect to said central longitudinal axis, wherein said mandrel comprises a flange substantially orthogonal, or very angled, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, wherein said mandrel also comprises first arm elements, able to define the cylindrical surface of the core that forms said coil, and second arm elements, opposite said flange, and able to define a second flank of said coil, said first and said second arm elements being movable between a first coil-forming position and a second coil-removal position, wherein said second arm elements are provided with preventing means able to contact said first arm elements, in order to prevent said first arm elements from moving from said first coil-forming position to said second coil-removal position when said second arm elements are in said first coil-forming position, and wherein said second arm elements comprise a supporting surface-able wall, which in said first coil-forming position is parallel to said flange, and a lower tooth which extends parallel to said central longitudinal axis and is aligned with said first arm elements to cooperate with the most external spiral of the a first layer of said spirals of said coil and to facilitate the inversion of deposition of said spirals.

10. (Previously Presented) Coiling device as in claim 1, characterized in that said mandrel also comprises a substantially cylindrical central body on which said first and said second arm elements are pivoted.

11. (Previously Presented) Coiling device as in claim 10, wherein first actuation means are mounted on said central body in order to command the

displacement of said first arm elements between one or the other of said first and second positions.

12. (Previously Presented) Coiling device as in claim 11, wherein said first actuation means comprise levers pivoted on said central body.

13. (Previously Presented) Coiling device as in claim 10, wherein temporary positioning and clamping means, arranged on said central body, are associated with said first arm elements.

14. (Previously Presented) Coiling device as in claim 10, wherein control means, arranged on said central body, are associated with said first arm elements in order to control their first position.

15. (Previously Presented) Coiling device as in claim 10, wherein second actuation means are mounted on said central body in order to command the displacement of said second arm elements between one or the other of said first and second positions.

16. (Currently Amended) Coiling device as in claim 5 15, wherein first actuation means are mounted on said central body in order to command the displacement of said first arm elements between one or the other of said first and second positions, wherein said second arm elements comprise a plurality of containing arms arranged at intervals around said central longitudinal axis and wherein said second actuation means comprise toothed elements associated with said containing arms and cooperating with rack means or endless screw means.

17. (Currently Amended) Coiling device as in claim 42 16, wherein said first actuation means comprise levers pivoted on said central body and wherein said levers and said rack means or said endless screw means are driven by rod means.

18. (Currently Amended) Coiling device as in claim 17, wherein said rod means comprise a rod arranged coaxial with said central longitudinal axis and ~~mobile~~ movable axially between two defined positions.

19. (Previously Presented) Coiling device as in claim 17, wherein said rod means comprise a rod arranged coaxial with said central longitudinal axis and able to rotate, in one direction or another, by an angle of defined amplitude.

20. (Previously Presented) Coiling device as in claim 18, wherein said rod is hollow inside.

21. (Currently Amended) Coiling method to coil rolled or drawn long products, by means of a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, wherein said long products are able to be wound on said mandrel in adjacent and superimposed spirals, in order to form a compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very inclined, with respect to said central longitudinal axis, wherein said mandrel comprises a flange substantially orthogonal, or very inclined, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, wherein in a first step to form said coil, said mandrel has first arm elements substantially parallel to said central longitudinal axis which define in a first coil-forming position the cylindrical surface of the core that forms

said coil, and second arm elements, opposite said flange, which define in a first coil-forming position a second lateral flank of said coil, wherein at the end of said first step to form said coil, said first and said second arm elements are displaced to a second position of non-interference with said coil, in order to allow said coil to be removed axially from the cantilevered end of said mandrel, wherein each one of said first arm elements is provided with a first inclined wall, which is inclined with respect to said longitudinal axis and which in said first coil-forming position is in contact with a corresponding second inclined wall provided in each one of said second arm elements, and wherein said flange comprises a deposition ring cooperating with said first arm elements in order to define the cylindrical winding surface of the first layer of spirals of said coil.

22. (Currently Amended) Coiling method as in claim 21, wherein in said second position of non-interference said first arm elements are inclined with respect to said central longitudinal axis, so as to define a substantially truncated cone surface converging towards said cantilevered end of said mandrel.

23. (Currently Amended) Coiling method as in claim 21, wherein in said second position of non-interference said second arm elements are substantially parallel to said central longitudinal axis and outside the space occupied by the formed coil.

24. (Currently Amended) Coiling method as in claim 21, wherein the displacement of said first and second arm elements to said second position of non-interference with said coil is achieved by rod means arranged coaxial with said mandrel.

25. (Currently Amended) Coiling method as in claim 21, wherein said second arm elements comprise a plurality of containing arms arranged at intervals around said central longitudinal axis and pivoted on a central body of said mandrel, and wherein said containing arms are pivoted on said mandrel by means of respective pins, in such a manner that during the movement of said containing arms from the said first coil-forming position assumed in said first step to form the coil to said second position of non-interference, said containing arms do not interfere with said spirals of said formed coil.

26. *Cancelled.*

27. (Previously Presented) Coiling method as in claim 21, wherein said second arm elements comprise a supporting surface able to cooperate with the most external spiral of the first layer of spirals of said coil.

28. (Previously Presented) Coiling method as in claim 24, wherein the displacement of said first arm elements between one or the other of the positions to form the coil and of non-interference is achieved by first actuation means connected to said rod means.

29. (Previously Presented) Coiling method as in claim 21, wherein temporary positioning and clamping means, arranged on a central body of said mandrel, are associated with said first arm elements.

30. (Previously Presented) Coiling method as in claim from 21, wherein control means associated with said first arm elements control the coil-forming position of said first arm elements.